



## How to improve the value delivered by IT?

Now that the glamour of the Internet has been washed off, it is time for a hard look at the main issue that the IT-world faces: How to deliver more value with tighter budgets while simultaneously increasing flexibility?

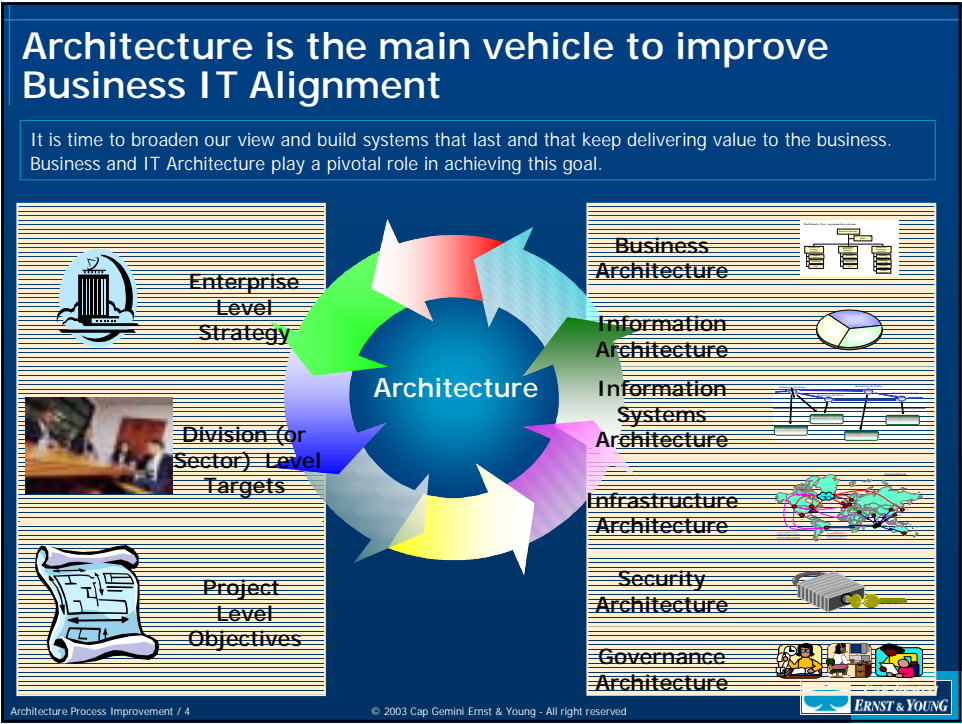
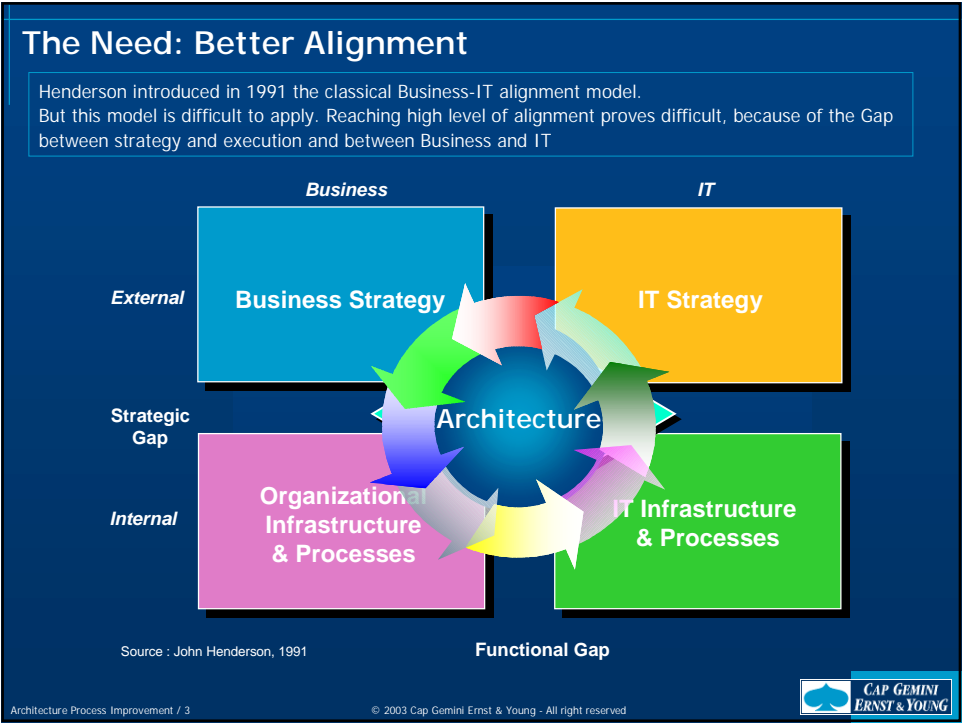
The diagram consists of two dark blue, jagged shapes representing landmasses, facing each other across a body of water. A green arrow points from the left landmass, labeled 'Business Strategies', towards the right landmass, labeled 'Systems and Technology Implementation'. The water between them is a light blue gradient.

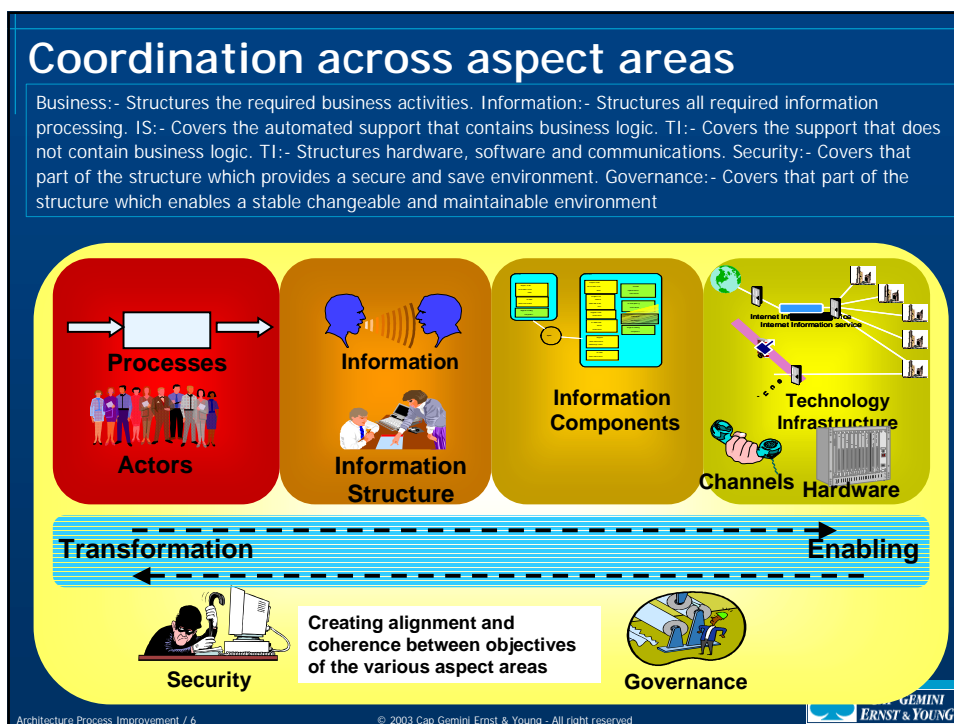
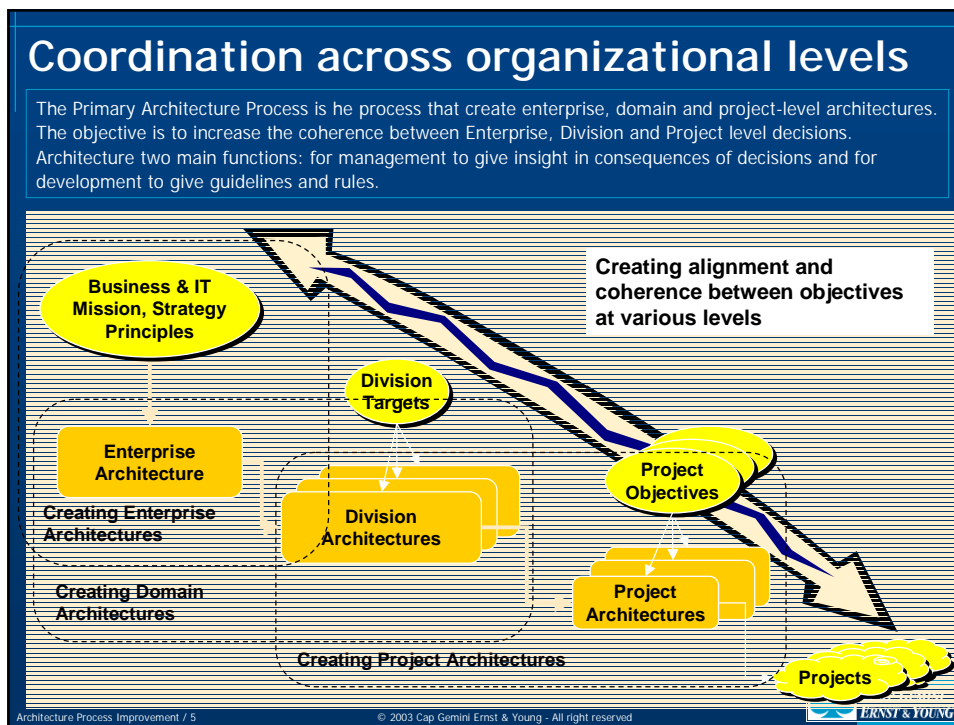
- Alignment between business strategy and technology
- Clear and consistent overall business direction and sponsorship
- Integration among applications and consistent data
- Increase ROI for large technology expenditures
- Improve cross-organisation program planning

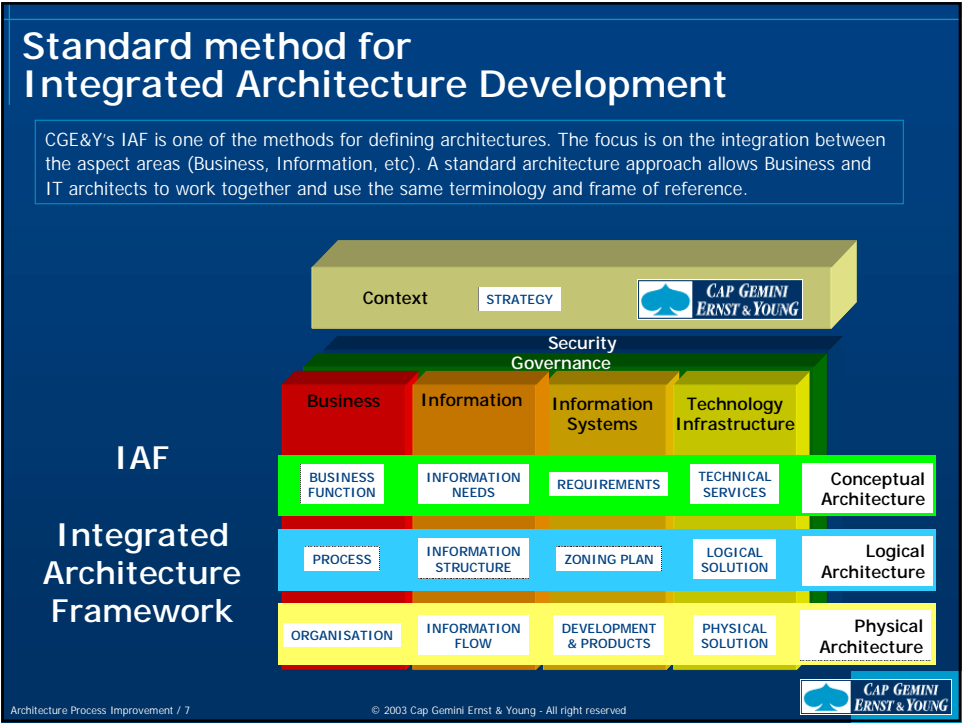
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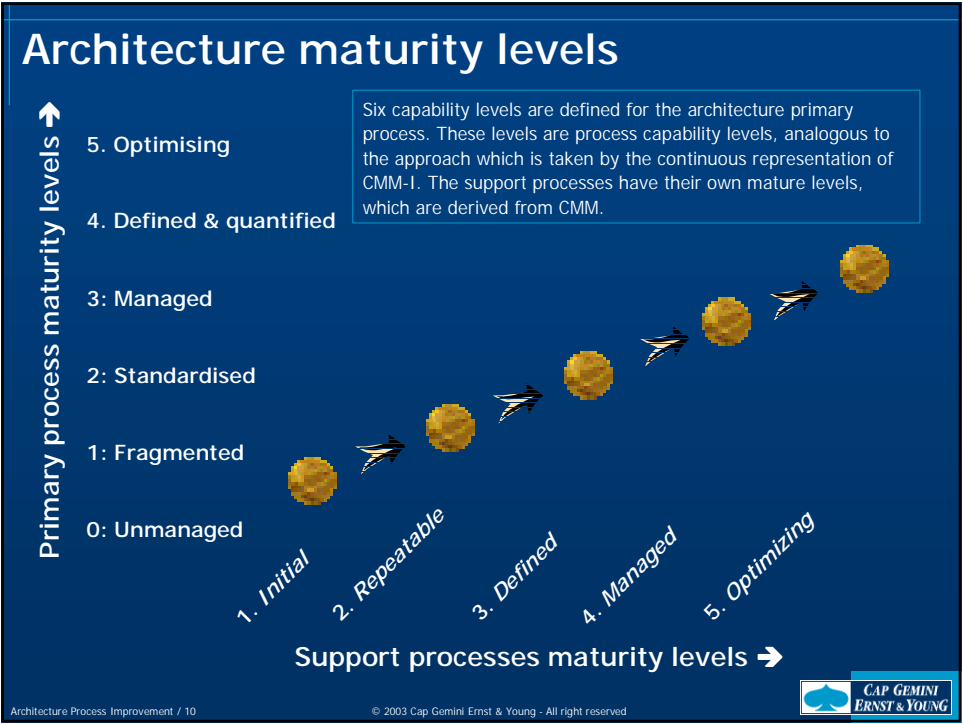
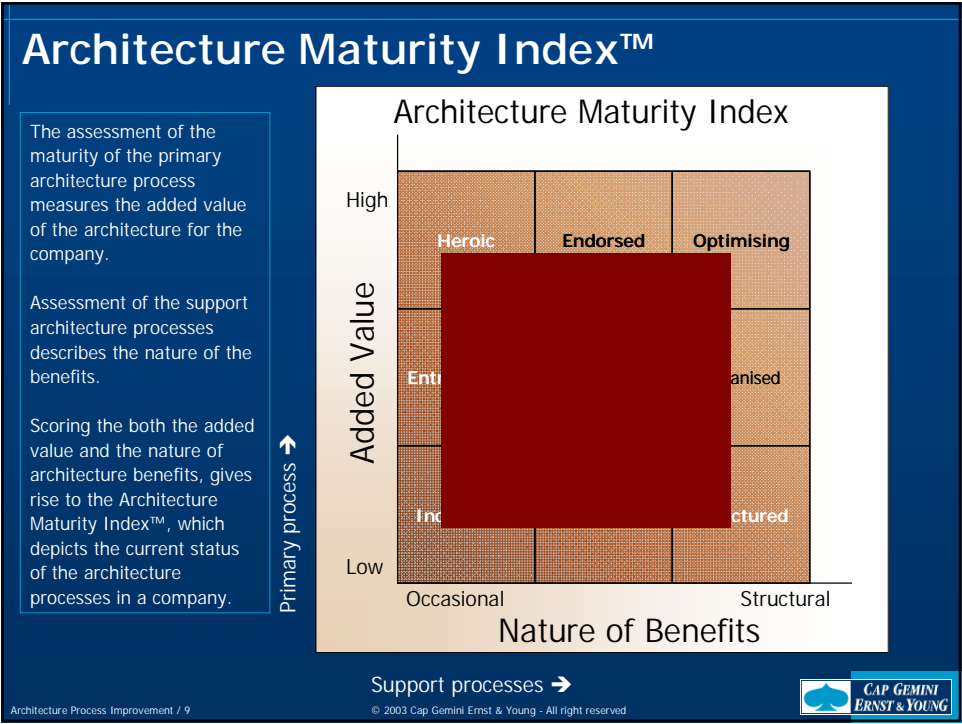
### Architecture Support Processes

Architecture support processes are those processes that support the architect in creating architectures. There are four main classes of support processes: (1) Architecture development processes, (2) Quality related processes, (3) Maintenance processes, and (4) Organizational and HRM processes.

<b>Architecture development processes</b>	<b>Quality improvement processes</b>
Architecture creation process	Architecture project management & planning
Architecture process measuring and change management	Configuration management
Architecture project tracking and reporting	Multidisciplinary, inter-group coordination and facilitation
Architecture quality management	Peer Review
Architecture standards management	Pattern recognition and reuse
	Architecture Control process
<b>Architecture maintenance processes</b>	<b>Organisational and human resource processes</b>
Architecture design archival and retrieval	Architect people management
Architecture design change management	Feedback and organisational learning
	Architecture education, mentoring & coaching

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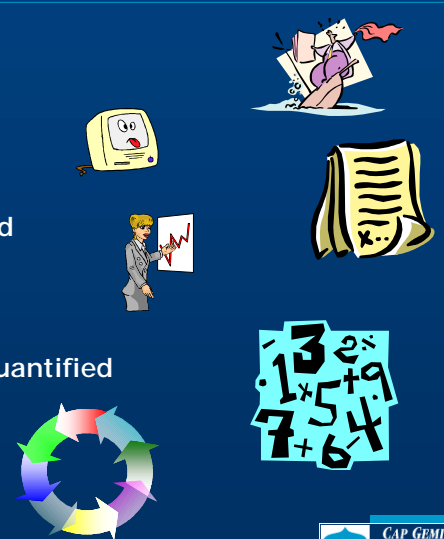
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## Maturity Levels Primary Architecture Process

These execution levels are analogue to process capability levels, which are defined by CMM-I. However, the exact levels as defined by CMM-I, do not fit with the development of the architecture execution process and, therefore, the content of these levels has been changed.

- Execution Level 0: Unmanaged
- Execution Level 1: Fragmented
- Execution Level 2: Standardised
- Execution Level 3: Managed
- Execution Level 4. Defined & quantified
- Execution Level 5. Optimising



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## Execution Level 0: Unmanaged

No enterprise, domain or project architectures are defined or managed. Projects are managed only on project-specific objectives. Architecture is unknown in the organization. IT development is purely project-oriented and the enterprise architecture is build by project initiatives, which happen to build a part of the enterprises architecture. The architecture execution process is not recognized or managed.

- **The enterprise architecture developed 'by accident'**
  - Built by many different, often unrelated projects
  - Grown historically
- **Complex, non-transparent architecture**
  - Many uncharted interrelations
- **Consequences**
  - Inflexible, difficult to maintain
  - High maintenance costs
  - Inability to follow the fast-changing business world



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## Execution Level 1: Fragmented



The need for more structure is felt mostly at the governance it level. Growing complexity results in inflexibility and this forces implementers of systems to rethink their usual strategy of considering architecture only at a project level. Architects at the organization feel the need for a structured approach to these problems and start to look at architectural methods. Training and education of new architects becomes important, to create a common frame of understanding for architects.

- **Some architectural elements are in place**
  - Various architectural elements are not standardised
  - Not linked together
- **Architectures are spit up along aggregation and aspect area dividing lines**
  - No standardisation in architectures and no relations between architectures
- **Architecture projects are executed within the scope of existing change programs and projects**
  - Architecture is largely an IT only exercise

## Execution Level 2: Standardised



Business staff and senior management are convinced of the advantages of using an architectural approach. Architecture training includes business architects. There is need for senior architects, able to oversee business and IT. Senior management make IT obligatory to include architectural efforts in any significant development effort.

- **Architectural descriptions are standardised**
- **Architectures are in place**
  - Business process architecture
  - Application architecture
  - Technical architecture
  - Some mutual relationships
  - Some project use architecture, some dont.
- **Business and IT work together**
- **Enterprise architectures are developed**

## Execution Level 3: Managed



The architecture execution process is recognized and is mainly in place, across aggregation levels and across aspect areas. It is not yet complete or managed as a whole.

- **Coordination across aggregation levels**
  - Enterprise architecture developed
  - Most Division level architectures developed
  - Most projects use architectures
  - Project level architectures are linked to higher-level architectures
- **Coordination across aspect areas**
  - Business, Information, Information systems, Technical, Security, Governance
- **Not yet managed as a whole**

## Execution Level 4. Defined & quantified



At this level, the architecture execution process is well defined and used throughout the organization. Enterprise and domain architectures are firmly in place and architecture maintenance is an important activity.

- **Quantitative objectives for quality and process performance**
- **Understood in statistical terms**
- **Managed throughout the life cycle of the architecture process**



## Execution Level 5. Optimising



An optimizing process focuses on continually improving the process performance through both incremental and innovative technological improvements. Process improvements that would address root causes of process variation and measurably improve the organization's processes are identified, evaluated, and deployed as appropriate. These improvements are selected based on a quantitative understanding of their expected contribution to achieving the organization's process-improvement objectives versus the cost and impact to the organization.

- The architecture process performance processes is continually improved
- Selected incremental and innovative technological process improvements are systematically managed and deployed
- The effects of the deployed process improvements are measured and evaluated against the quantitative process-improvement objectives

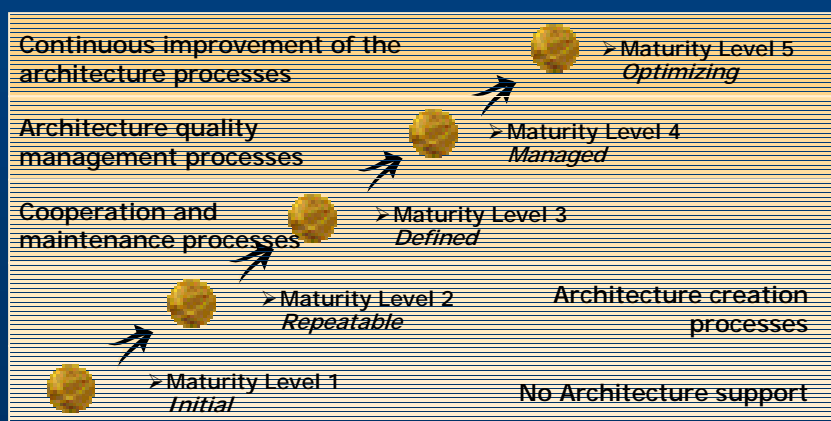
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## Maturity Levels Secondary Architecture Processes

The secondary processes have their own mature levels, which are derived from the CMM model.



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## Architecture process Improvement: Architecture Maturity Index

### Summary

Architecture is a new, key discipline, complementary to existing disciplines, to improve Business-IT alignment

Architecture increases coordination and coherence across organizational boundaries and across aspect boundaries

Architecture has it's own need for a capability maturity approach

Architecture maturity is measured across two dimensions

→ Added Value

→ Nature of Benefits

